The Furman Institute of Running and Scientific Training (FIRST) 10 mile training program is based on results from FIRST's training studies. Results indicate that runners are able to improve race performances running only three days a week, following a specific training plan that includes distance and pace for each workout and cross-training.

Pacing is a crucial component to this training program. From our running experience and previous research, it appears that training intensity is the most important factor for improving the physiological processes that determine running performance. Training program paces are based on current best 5K RACE pace.

If you have not run a recent 5K, complete the following workout to estimate your 5K time.

> After a 10-15 minute warm-up, run 3 x 1600 meters on a measured 400 meter track with a one minute recovery (rest and walk) between the three intervals. The goal of the workout is to run the fastest time you can maintain for all three one-mile repeats. You should strive to have little deviation in the finish times for the three intervals. Your pace per mile for a 5K race is a good predictor (target) for the pace per 1600 meters that you will be able to achieve for the three intervals.

Assuming that the times for the 3 x 1600m workout are within a small range (< 10 second range), add 15 seconds to your average time for the 1600 repeats and multiple that time by 3.1 to estimate your 5K time.

This training program has produced good results with Key Run #1 on Tuesday, Key Run #2 on Thursday and the long run completed on the weekend. Runners can do the three key workouts in any order throughout the week; however, you need to allow at least one day between the key workouts. Runners are encouraged to either cross-train or complete easy runs on other days of the week.

FIRST Training Program Sample Week

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Cross-train 30 – 45 min.	**Key Run #1**	Cross-train 30 – 45 min.	**Key Run #2**	Off	**Key run #3**	Cross-train 30 – 45 min.

Key Run #1: Track Repeats: improve $VO_{2\ MAX}$, speed and running economy

> Most runners can run the first few repeats faster than the specified target time. However, the challenge is to run the entire workout at the target time with little or no deviation in the times for each repeat. Also, the objective is not to run the repeats as fast as you can. Keep in mind that you have two other key workouts to perform for the week. Do not sacrifice meeting the target times for the tempo and long runs by running the repeats at an exhausting speed that does not provide sufficient recovery for key workouts # 2 and #3. The repeats should be challenging but they are not a race.

Key Run #2: Tempo Run: improve endurance by raising lactate threshold

> **Example: 1 mile warm-up, 2 miles @ short tempo pace and 1 mile cool down** means to start slowly and gradually pick up the pace and after one mile run the next two miles at the designated pace based on your 5K race pace. This short-tempo pace is approximately 15 seconds slower than your per mile 5K race pace. After the two-mile steady run then slow down and run an easy cool down mile. Key Workout #2 would result in 4 continuous miles.

Key Run #3: Long Run: improve endurance by raising aerobic metabolism

> Try starting your training runs a bit slower than the prescribed pace and then pick up the pace in the middle section of your training run. Try to have a strong finish over the last couple of miles of your long training runs. Faster than recommended pace running during the middle phase of the long run can offset the earlier slower pace, so that the average targeted pace for the entire run can be met.

Cross Training: Two of the primary purposes of the cross-training in the FIRST training approach is to help keep overall aerobic fitness high and help the running muscles recovery from the stress of the high intensity running. Therefore, we suggest that the two cross training workouts are of a moderate to hard effort level and done in non-weight-bearing modes of exercise. We also recommend an easy cross-training day after Key Run #3 to serve as an active recovery day.

	Key Run Workout #1	Key Run Workout #2	Key Run Workout #3
16	10-20 minute warm-up 10 x 400 (90 sec. RI) 10 minute cool-down	2 miles easy 3 miles @ Short Tempo pace 1 mile easy	10 miles @ no specific pace, easy/relaxed effort run
15	10-20 minute warm-up 5 x 800 (400m RI) 10 minute cool-down	5 mile run @ Mid Tempo pace	9 miles @ LT + 20 sec./mile
14	10-20 minute warm-up 3 x 1600 (400m RI) 10 minute cool-down	1 mile easy 3 miles @ Short Tempo pace 1 mile easy	9 miles @ LT + 20 sec./mile
13	10-20 minute warm-up 1 x 1600, 2 x 800, 4 x 400 (400 RI) 10 minute cool-down	6 miles @ Mid Tempo pace	11 miles @ LT + 30 sec./mile
12	10-20 minute warm-up 400, 800, 1600, 800, 400 (400 RI) 10 minute cool-down	1 mile easy, 2 miles @ MT pace 1 mile easy, 2 miles @ MT pace 1 mile easy	10 miles @ LT + 20 sec./mile
11	10-20 minute warm-up 6 x 800m (1:30 RI) 10 minute cool-down	5 mile run @ Mid Tempo pace	12 miles @ LT + 30 sec./mile
10	10-20 minute warm-up 2 x (6 x 400m) (1:30 RI) (2:30 RI between sets) 10 minute cool-down	1 mile easy, 2 miles @ ST pace 1 mile easy, 2 miles @ ST pace 1 mile easy	8 miles @ LT + 10 sec./mile
9	10-20 minute warm-up 2 x 400, 2 x 800, 1 x 1600 (400 RI) 10 minutes cool-down	5 mile run @ Mid Tempo pace	13 miles @ LT + 20 sec./mile
8	10-20 minute warm-up 3 x 1600 (2:00 RI) (4:00 RI between sets) 10 minute cool-down	6 mile run @ Mid Tempo pace	10 miles @ LT + 10 sec./mile
7	10-20 minute warm-up 6 x 800 (400 RI) 10 minute cool-down	5 mile run @ Mid Tempo pace	13 miles @ LT + 20 sec./mile
6	10-20 minute warm-up 400, 800, 1600, 800, 400 (400 RI) 10 minute cool-down	6 miles, easy & relaxed effort	10 miles @ LT + 10 sec./mile
5	10-20 minute warm-up 12 x 400m (400 RI) 10 minute cool-down	5 mile run @ Mid Tempo pace	13 miles @ LT + 20 sec./mile
4	10-20 minute warm-up 2 x (800, 1600) (400 RI) 10 minute cool-down	1 mile easy, 2 miles @ MT pace 1 mile easy, 2 miles @ MT pace 1 mile easy	10 miles @ LT + 10 sec./mile
3	10-20 minute warm-up 3 x (400, 800, 400) (1:30 RI) (2:30 RI between sets) 10 minute cool-down	5 mile run @ Mid Tempo pace	12 miles @ LT + 20 sec./mile
2	10-20 minute warm-up 3 x 1600 (400m RI) 10 minute cool-down	2 miles easy 3 miles @ Short Tempo pace 1 mile easy	8 miles @ LT + 10 sec./mile
1	10-20 minute warm-up 6 x 400m (400m RI) 10 minute cool-down	3 mile run, easy & relaxed effort	**10 Mile Race**

RI = Rest Interval; which may be a timed rest/recovery interval or a distance that you walk/jog